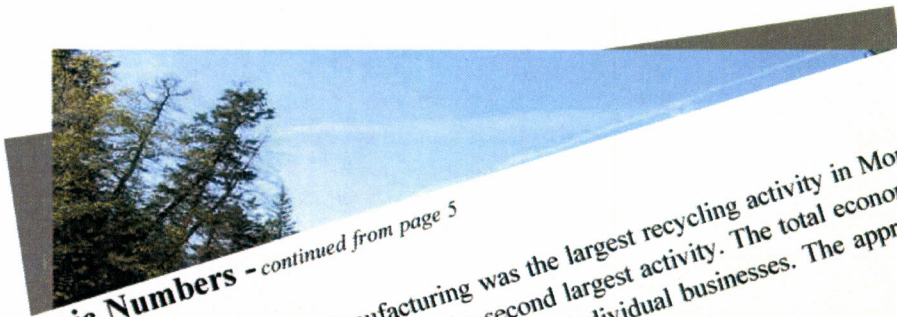


The Economic *and* Ecological Impacts *of* Recycling in Montana



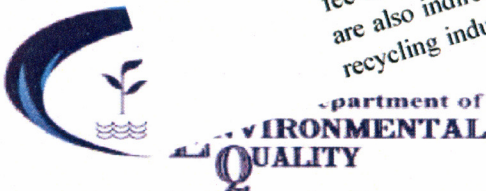
Overall Economic Numbers - continued from page 5

for recycling in Montana. Manufacturing was the largest recycling activity in Montana and the processing of recycled materials was the second largest activity. The total economic numbers below were largely concentrated within several individual businesses. The approximate numbers for 2003 are as follows:²

| | |
|----------------------|--------------|
| Full Time Jobs: | 300 |
| Part Time Jobs: | 40 |
| Wages (+ benefits)*: | \$ 9,330,000 |
| Revenues: | \$89,120,000 |

* Assuming benefits to be \$.15 per \$1.00 wage for survey respondents who did not give benefit amounts.

The average wage (including benefits) in Montana's recycling industry was calculated to be about \$29,000 ($9,332,580/321.5 = \$29,028$). Total avoided landfill costs in 2002 as a result of recycling were estimated to be \$4,615,776—128,216 tons recycled which avoided landfill at a fee of \$36.00 per ton. (Brian Spangler, Montana Department of Environmental Quality). There are also indirect positive economic effects from recycling and tax revenues collected from the recycling industry in Montana. Estimating these numbers is beyond the scope of this paper.



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Overall Economic Numbers - continued from page 5

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Environmental Impacts of Recycling in Montana

The amount of total waste generated in Montana in 2002 was 1,194,243 tons. The amount of waste landfilled was 1,004,635 tons or about 84% of total waste and the amount incinerated was 13,037 tons or about 1% of total waste. The total amount of waste that was recycled was 128,216 tons or 11% of the total generated. Four percent or 48,355 tons were composted. So, about 15% of Montana's total waste was either recycled or composted. The 128,216 tons recycled was reported from 12 different companies/public facilities in Montana with Pacific Steel being the largest recycler overall. Eight companies comprised the 48,355 tons of composted material (Montana Department of Environmental Quality, Air, Energy, and Pollution Prevention Bureau).

In 2002, numbers were estimated for total tonnage of recycled materials in Montana. The tonnage numbers were collected from landfills and transfer reports submitted to the Solid Waste Department at DEQ. These numbers were obtained from landfills, transfer facilities and

² These results were produced by a survey conducted by the Air, Energy and Pollution Prevention Bureau of the Montana Department of Environmental Quality in the Spring of 2004. Matt Elsaesser was the principle investigator of the survey. The results do not include the small number of contacts that did not respond to the survey, nor the activity of sole proprietors who are not listed or advertised as a public business or recycling operation. Emerging companies and recycling components of large institutions are for the most part not included in this survey. Recycling activity for this project included the collection, transport, processing, remanufacturing and sale of post consumer products. It includes composting as recycling activity, but does not include wrecking yards. The list of participants to meet these criteria was constructed using the State Database, Recycle Montana Recycling Guide, a D.E.Q. mailing list, telephone directories and staff knowledge. The survey was conducted primarily by phone, with letters sent for some respondents by their request.